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09/833,235	04/10/2001	Dejian Liu	USP1473A-DLM	3011

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EXAMINER

SHORTLEDGE, THOMAS E

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,235

Applicant(s)

LIU ET AL.

Examiner

Thomas E Shortledge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 3 is object to because of the following informalities: **the** claim within part (iii) reads “complying answers,” where the context of the sentence suggests this should read supplying answers. Appropriate correction is required.
 2. Claim 5 and 6 are objected to because of the following informalities: the claims read “...to increase numbers of sentence,” where sentence should be in the plural form, sentences. Appropriate correction is required.
 3. Claims 5 and 6 are objected to because of the following informalities: the claims use the term “modified vocabulary treasure database,” but the term is never explained within the specification. Appropriate correction is required.
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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ball (Mixing Scripted Interaction with Task-oriented Language Processing in a Conversational Interface)

As to claim 1, Ball teaches:

(a) providing an artificial intelligence for sentences (a conversational interface, page 101, col. 2);

(b) forming an sentence ID for each of said sentences, which is an uniqueness of said sentence based on meaningful words (key words) and an order of said meaningful word (key phrases), (creating a speak easy pattern for each input based on the canonical example of the input, the list of ordered word patterns, and a list of key words or phrases, page 102, col.1. It would be inherent that a sentence ID would be created so that the input sentence could be properly matched to the response sentence).

(c) teaching the artificial intelligence to recognize said sentence ID (matching an output to the recognized input, page 102, col. 1. It would be inherent that since the

artificial intelligence was able to recognize a matching output for the input, it was taught to recognize the sentence ID.)

(d) looking up said sentence ID in a sentences relationship database and choosing a reply, wherein said sentences relationship database includes said sentences, said meaningful words from said sentences, category of said sentences, and a list of possible sentences from said sentences as said reply (each user utterance is evaluated against the collection of utterance patterns occurring in the script, where the output is depending of the list of ordered word patterns in the input and a list of key words or phrases in the input, col. 1, page 102).

As to claim 2, Ball teaches:

(e) providing a conversion sentences database by having a predetermined number of people to use a predetermined number of words of a first language in conversations and recording sentences made during said conversations (a database containing SpeakEasy patterns to match to the input, where the script writer is able to create responses to a variety of plausible user inputs, col. 2, page 102. It would be inherent that since the script writer has full control over editing the database, the database would contain a predetermined responses for each possible input supplied, and since the script writers have control over the database, they would act as the predetermined number of people);

(f) selecting a predetermined number of usable sentences from said recorded sentences and generating said sentence ID for each said recorded sentences (creating

a database, where the database contains a custom response to a variety of plausible user inputs, col. 2, page 102);

(g) obtaining a replay sentence with respect to each of said recorded sentences (supplying custom responses for a variety of plausible inputs, creating more natural response, col. 2, page 102);

(h) filtering said reply sentence based on a conversational quality thereof (if the script writer feels the response to a certain input is not acceptable, the script writer is able to supply a new and more natural response, improving the quality of the conversation, col. 2, page 102);

(i) forming a sentence category by cataloging said filtered reply sentences according to manners and relationships thereof (semantic patterns and phrases are linked to corresponding operations based on the parameters of the operation, col.1, page 103. It would be inherent that when the patterns are linked to the corresponding operations a cataloging system would be created, based on the parameters of the operations); and

(j) inputting said selected sentences, said sentences ID, and said sentence category into one database, together with said sentence IDs of said reply sentences (a database containing the SpeakEasy patterns is supplied, where input utterances are matched with domains, by a list or ordered word patterns and a list of key words or phrases, col. 1, page 102. It would be inherent that a sentence ID would be included so that each output response would properly be matched to each key words or phrases within the input).

As to claim 3, Ball teaches:

(i) inputting a sentence having a sentence ID not included in said database without identifying a replying sentence (able to respond the user with an error message such as "Sorry, I don't understand," col. 2, page 102. It would be inherent that the system was unable to find an appropriate reply for the input and had to respond with an error message instead);

(ii) using a conversation technique to keep a conversation going on, while a system logs a new un-replyable sentence (the script writer is able the edit the SpeakEasy patterns to edit the output message, while the system replies with the standard error message, col. 2, page 102); and

(iii) complying answers to said new sentences and inputting into said database, so that when a same question is asked next time, said artificial intelligences is able to answer correctly, (the script writer is able to add a new reply sentence for an input that previously had no reply, col. 2, page 102).

As to claim 4, Ball teaches a relationship between said sentences is established based on interrelationship of each said sentence ID (each input utterance is matched to a pattern, where the patterns are linked to corresponding parameters of operations, col. 1, page 103).

As to claims 5 and 6, Ball teaches a modified vocabulary treasure database is used to increase numbers of sentence by several fold in said sentence relationship database so as to improve a matching of said sentence lds (the system uses deep processing of utterances to not only match the generic request, but to further match the utterance to a database of semantic patterns and phrases that correspond to parameters of an operation, col. 2 page 102, through col. 1, page 103).

As claims 7, 10, 13, and 16, Ball teaches a chatter robot (interface agent), which is basically a character as an interface between said artificial intelligences with users, wherein said character takes a form of figures and is programmed to "float" on to of other running software programs of a computer, so as to interact with said users via a common language, adapted for having conversation with said users, completing function for said users, and developing humanlike relationship with said users (an interface agent represented as an animated character that is on top of application windows where the character interfaces with the user via a free-form dialogue, where the character is to act as an personal assistant, scheduling events, generating reminders, informing the user of breaking news and generally acting as an entreating companion, col. 2, page 101).

As to claims 8, 11, 14, and 17, Ball teaches an active recommendation system, which suggests things for said users based on conversation contents and preference there, (a personal assistant, which is able to act as an entertaining companion, col. 2,

page 101. The entertaining companion is able to create recommendations as responses based on the content of the input (col. 1, page 101), an example of a recommendation response would be "Sorry, I don't know anything about theatres, but I can tell you what's on TV, " col. 2, page 102).

As to claim 19, Ball teaches a chatter robot (interface agent), which is basically a character as an interface between said artificial intelligences with users, wherein said character takes a form of figures and is programmed to "float" on to of other running software programs of a computer, so as to interact with said users via a common language, adapted for having conversation with said users, completing function for said users, and developing humanlike relationship with said users, wherein said computer interface further comprises an active recommendation system which suggest things for said users based on conversation contents and preference thereof (an interface represented as an animated character that is on top of application windows where the character interfaces with the user via a free-form dialogue, where the character is to act as an personal assistant, scheduling events, generating reminders, informing the user of breaking news and generally acting as an entreating companion, col. 2, page 101. The personal assistant is able to create recommendations as responses based on the content of the input (col. 1, page 101), an example of a recommendation response would be "Sorry, I don't know anything about theatres, but I can tell you what's on TV, " col. 2, page 102).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9, 12, 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ball as applied to claims 6, 7, 10, 13, and 16 above.

As to claims 9, 12, 15, and 18, Ball does not explicitly teach the computer interface is used to promote computer subjects by utilizing characters from said computer subjects.

However, Ball teaches using animated characters as the interface agents, such as "Peedy the Parrot" implemented by Microsoft (col. 2, page 101). It would have been obvious to one of ordinary skill in the art at the time of invention to use the animated character as a promotional device to increase the entertainment level of the interface agent, and its responses (col. 2, page 101).

As to claim 20, Ball teaches a chatter robot (interface agent), which is basically a character as an interface between said artificial intelligences with users, wherein said

character takes a form of figures and is programmed to "float" on top of other running software programs of a computer, so as to interact with said users via a common language, adapted for having conversation with said users, completing function for said users, and developing humanlike relationship with said users, (an interface represented as an animated character that is on top of application windows where the character interfaces with the user via a free-form dialogue, where the character is to act as a personal assistant, scheduling events, generating reminders, informing the user of breaking news and generally acting as an entreating companion, col. 2, page 101).

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However, Ball teaches using animated characters as the interface agents, such as "Peedy the Parrot" implemented by Microsoft (col. 2, page 101). It would have been obvious to one of ordinary skill in the art at the time of invention to use the animated character as a promotional device to increase the entertainment level of the interface agent, and its responses (col. 2, page 101).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lieberman (Autonomous Interface Agents), Lamberti et al. (5,369,575), Dahlgren et al. (5,794,050), Bauer (5,877,759), Tackett et al. (6,314,410), Tanaka et al. (4,931,926), Prevost et al. (6,570,555), Sadakuni (2003/0069863), Dean

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et al. (Strategic Directions in Artificial Intelligence), Simmons (Natural Language Question Answering Systems: 1969), Preston (6,446,081), Weizenbaum (ELIZA - A Computer Program For the Study of Natural Language Communication Between Man and Machine), Schramm (4,670,848), and Cassell et al. (Embodiment in Conversational Interfaces: Rea).

Lieberman teaches interface agents that are able to provide the user with computer assistance.

Lamberti et al. teach a user/computer interface where the input is parsed to find the action the input is to perform.

Dahlgren et al. teach parsing the input using a combination of both top-down and bottom-up parsing strategies.

Bauer teaches an interface for user/agent interaction where the agent is able to provide assistance with processing tasks.

Tackett et al. teach an automated interface program to interact with users, and executing an action when a predefined category is activated.

Tanaka et al. teach a conversation type inquiry-and-answering system that could be used in a diagnosing system.

Prevost et al. teach conversational characters that are able to act as agents to carry out applications within the computer.

Sadakuni teaches an interactive computer interface involving artificial intelligence that is able to output emotion using an emoting generating unit.

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Dean et al. teach the strategies behind constructing intelligent interface machines.

Simmons teaches answering an inputted natural language question with a natural language output.

Preston teaches using a human/computer interface to input and retrieve data.

Weizenbaum teaches a program that accepts a natural language input, and is able to converse with the user with a natural language output.

Schramm teaches an artificial intelligence system able to accept and input and find a matching output response within a database.

Cassell et al. teach embodied conversation agents that are able to converse and carry out actions determined by the user.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E Shortledge whose telephone number is (703)605-1199. The examiner can normally be reached on M-F 8:00 - 4:30.

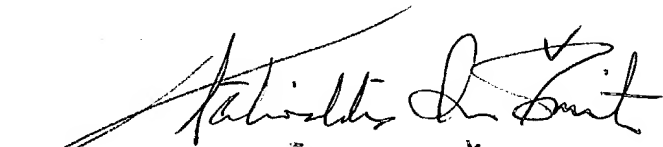
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on (703)306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS

12/15/2004



TĀLIVALDIS IVARS ŠMITS
PRIMARY EXAMINER